THE FOLLOWING IS THE ENGLISH TRANSLATION OF THE ANNEXES TO THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT UNDER ARTICLE 34:
Amended Sheets (pages 23-27)

[Amendment under Article 34]

CLAIMS

1. (Amended) A tunnel junction device, comprising an electrode, another electrode, and an electrically insulating layer arranged between these electrodes, the former electrode comprising an $A_{1-x}B_xM_{1-y}M'_yO_{3-\delta}$ oxide ferromagnetic (including ferrimagnetic) electroconductive solid material, wherein x and y satisfy the conditions: $0 \leq x \leq 1$ and $0 \leq y \leq 1$; δ represents an oxygen deficiency; "A" represents an element selected from the group consisting of Ca, Sr, Ba, and other alkaline earth elements, La and other rare earth elements, elements including Y, Bi, and Pb; B represents another element which is different from "A", selected from the group consisting of Ca, Sr, Ba, and other alkaline earth elements, La and other rare earth elements, elements including Y, Bi, and Pb; M represents a transition metal element such as Mn, Fe, Co, Ni, or Cu; and M' represents another transition metal element such as Mn, Fe, Co, Ni, or Cu, M' being different from "M", and the other electrode comprising an $A_{1-x'}B_{x'}M_{1-y'}M'_{y'}O_{3-\delta}$ oxide ferromagnetic (including ferrimagnetic) electroconductive solid material having a component ratio x' being not equal to x and y' being not equal to y, wherein x' and y' satisfy the conditions: $0 \leq x' \leq 1$, $0 < y' \leq 1$; and δ represents an oxygen deficiency.

2. The tunnel junction device according to claim 1,

comprising two electrodes, and an electrically insulating layer arranged between these electrodes, wherein one of the two electrodes is an electrode comprising an $A_{1-x}B_xMnO_{3-\delta}$ oxide as a ferromagnetic (including ferrimagnetic) electroconductive solid material, wherein x satisfies the condition: $0 \leq x \leq 1$; δ represents an oxygen deficiency; "A" represents an element selected from the group consisting of Ca, Sr, Ba, and other alkaline earth elements, La and other rare earth elements, elements including Y, Bi, and Pb; and B represents another element which is different from "A", selected from the group consisting of Ca, Sr, Ba, and other alkaline earth elements, La and other rare earth elements, elements including Y, Bi, and Pb, and wherein the other electrode is an electrode comprising another $A_{1-x'}B_{x'}Mn_{1-y'}Ru_{y'}O_{3-\delta}$ oxide as a ferromagnetic (including ferrimagnetic) electroconductive solid material, wherein x' and y' satisfy the conditions: $0 \leq x' \leq 1$, $0 < y' \leq 1$; and δ represents an oxygen deficiency.

3. (Amended) The tunnel junction device according to claim 2, comprising two electrodes, and an electrically insulating layer arranged between these electrodes, wherein one of the two electrodes is an electrode comprising a $La_{1-x}Sr_xMnO_{3-\delta}$ oxide as a ferromagnetic (including ferrimagnetic) electroconductive solid material, wherein x satisfies the condition: $0.2 \leq x \leq 0.5$; and δ represents an oxygen deficiency,

and wherein the other electrode is an electrode comprising a $La_{1-x'}Sr_{x'}Mn_{1-y}Ru_yO_{3-\delta}$ oxide as a ferromagnetic (including ferrimagnetic) electroconductive solid material, wherein x' and y satisfy the conditions: $0.2 \leq x' \leq 0.5$, $0 < y \leq x$; and δ represents an oxygen deficiency.

4. The tunnel junction device according to claim 3, comprising an electrode arranged on or above a substrate supporting the device, another electrode arranged above the electrode with the interposition of an electrically insulating layer, wherein the former electrode comprises a $La_{1-x}Sr_xMnO_{3-\delta}$ oxide as a ferromagnetic (including ferrimagnetic) electroconductive solid material, wherein x satisfies the condition: $0.2 \leq x \leq 0.5$; and δ represents an oxygen deficiency, and wherein the latter electrode comprises a $La_{1-x'}Sr_{x'}Mn_{1-y}Ru_yO_{3-\delta}$ oxide as a ferromagnetic (including ferrimagnetic) electroconductive solid material, wherein x' and y satisfy the conditions: $0.2 \leq x' \leq 0.5$, $0 < y \leq x$; and δ represents an oxygen deficiency.

5. The tunnel junction device according to any one of claims 1 to 4, wherein the electrically insulating layer is an electrically insulating layer comprising an $A_{1-x}B_xM_{1-y}M'_yO_{3-\delta}$ oxide, wherein x and y satisfy the conditions: $0 \leq x \leq 1$ and $0 \leq y \leq 1$; δ represents an oxygen deficiency; "A" represents an element selected from the group consisting of Ca, Sr, Ba, and other alkaline earth elements, La and other rare earth

elements, elements including Y, Bi, and Pb; B represents another element which is different from "A", selected from the group consisting of Ca, Sr, Ba, and other alkaline earth elements, La and other rare earth elements, elements including Y, Bi, and Pb; M represents a transition metal element such as Mn, Fe, Co, Ni, or Cu; and M' represents another transition metal element such as Mn, Fe, Co, Ni, or Cu, M' being different from "M".

6. The tunnel junction device according to any one of claims 1 to 4, wherein the electrically insulating layer comprises $SrTiO_{3-\delta}$, wherein δ represents an oxygen deficiency.

7. The tunnel junction device according to any one of claims 1 to 4, wherein the electrically insulating layer comprises $LaAlO_{3-\delta}$, wherein δ represents an oxygen deficiency.

8. The tunnel junction device according to any one of claims 1 to 7, wherein at least one of the ferromagnetic (including ferrimagnetic) electroconductive solid materials constituting the electrodes, and a solid material constituting the electrically insulating layer arranged between these electrodes is prepared by pulsed laser deposition.

9. The tunnel junction device according to claim 8, wherein a $La_{1-x}Sr_xMn_{1-y}Ru_yO_{3-\delta}$ oxide solid material, wherein x and y satisfy the conditions: $0.2 \leq x \leq 0.5$, $0 < y \leq x$; and δ represents an oxygen deficiency, is prepared as the

ferromagnetic (including ferrimagnetic) electroconductive electrode by pulsed laser deposition using such a material that the resulting $La_{1-x}Sr_xMn_{1-y}Ru_yO_{3-\delta}$ oxide, wherein x and y satisfy the conditions: $0.2 \leq x \leq 0.5$, $0 < y \leq x$; and δ represents an oxygen deficiency, shows a lattice constant of 3.82 angstroms to 3.87 angstroms.

10. The tunnel junction device according to claim 8, wherein a $La_{1-x}Sr_xMn_{1-y}Ru_yO_{3-\delta}$ oxide solid material, wherein x and y satisfy the conditions: $0.2 \leq x \leq 0.5$, $0 < y \leq x$; and δ represents an oxygen deficiency, is prepared as the ferromagnetic (including ferrimagnetic) electroconductive electrode by pulsed laser deposition at a substrate temperature of 750°C to 900°C at an atmospheric oxygen pressure of 133 mPa (1 mTorr) to 13.3 Pa (100 mTorr).